HP Compaq Business Desktop dc7100 Software Overview

June 2004

Abstract

The purpose of this white paper is to present both an overview of the preinstalled software operating system support along with a brief description of major software components and features. This white paper covers the new HP Compaq Business Desktop dc7100 models, along with a comparison to HP Compaq Business Desktop d530 and Compaq Evo d510.

Definition of Terms

Preinstalled applications – Applications that are installed in the factory and are ready to use immediately.

Preloaded applications – Some applications from HP are loaded on the hard drive in an uninstalled state; the user must install the application manually before it can be used. The HP Software Setup application provides a simple interface to access the uninstalled applications.

Software Setup –An application provided by HP that makes it easier to locate and install software that is preloaded (not preinstalled) on the hard drive.

Product family – A set of form-factor types within a *numerically-defined series*. For example, the HP Compaq Business Desktop dc7100 Series consists of the dc7100 convertible minitower, dc7100 small form factor, and dc7100 ultra-slim desktop.

QFE – Often referred as QFE's or quick fixes, Microsoft calls them Quick Fix Engineering Software Updates. The QFE's are important software updates are provided by Microsoft and many are included in operating system images provided by HP.

Restore Plus! CD –The dc7100 series hard drive recovery media provided by HP on CD and allows a user to re-image the system back to its factory state.

Standalone service packs – A large collection of QFEs from Microsoft that are grouped together to provide a significant update to an existing Microsoft operating system.

Sysprep (System preparation tool)—This is a Microsoft tool that prepares the operating system for imaging. This tool must be run before imaging a system and then deploying that image. Sysprep.exe can be found on your operating system CD obtained either from HP or Microsoft. Sysprep, as well as other useful documentation and tools, is contained in the named deploy.cab, located in the support\tools directory.

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Operating System Support

Operating systems preinstalled[1] with the dc7100 series include one of the following:

- Microsoft Windows© XP Professional with Service Pack 1a (Service Pack 2 when available)
- Microsoft Windows XP Home with Service Pack 1a (Service Pack 2 when available)
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Operating systems supported[2] for the dc7100 series include:

- Windows 2000 with Service Pack 4

Operating systems NOT supported but have been tested and documented[3] for the dc7100 series include:

- Microsoft Windows NT (additional information provided later in this document)
- Microsoft Windows 98SE

Operating systems NOT supported4 (not a complete list) by HP for the dc7100 series include:

- IBM OS/2
- Windows 95
- Windows Me

Operating systems certified[5] for the dc7100 series include:

- Red Hat Enterprise Workstation 3.0 (post launch availability)
- SUSE Linux Desktop (post launch availability)
- Novell Netware client (post launch availability)

Microsoft Windows XP Professional

The dc7100 series will launch with a choice of Microsoft Windows XP Professional with Service Pack 1a or Windows XP Home Edition Service Pack 1a preinstalled. The preinstall image will transition to Windows XP SP2 when it becomes available.

Below is a table highlighting software components added to the dc7100 compared to previous generation product and can be used by IT Professionals as a guide to note driver changes within the Windows XP operating system.

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[1] Pre-installed support is defined as follows: 1) operating system offered for sale pre-installed on system, 2) drivers fully WHQL certified, and 3) drivers posted to WEB (www.hp.com) at product announcement.
[2] Supported is defined as follows: 1) Full HP testing, 2) all drivers are available on web/CD within 30 days of product announcement.
[3] Test & Document Support is defined as follows: 1) OS is loaded and tested in a "will it run criteria", 2) no driver development, 3) problems are documented, 4) no integration testing and 5) not support provided by HP.
[4] Not Supported is defined as follows: 1) No loading of operating system, 2) no testing and 3) no issue documentation.
[5] Certified is defined as follows: 1) Hardware is provided to vendor for testing and certification, 2) all drivers are OS vendor dependant, no support provided by HP, and 3) certification is posted to vendor Web site.

Table 1 Windows XP Software Component Version Comparison

Windows XP Driver Comparison	dc7100	d530	D510
Name	Version	Version	Version
ROM BIOS			
ROM Firmware for Intel 845G	-	-	68602
ROM Firmware for Intel 865 (CMT/SFF)	-	786B2	-
ROM Firmware for Intel 865 (USDT)	-	786B1	-
ROM Firmware for dc7100	786C1	-	-
Audio Drivers			
ADI AC97 Integrated Digital Audio	5.12.1.4070	5.12.01.3570 B	5.12.01.3620 D
ATI Radeon Graphics Driver PCI Express (post launch availability)	8.01	-	-
Communications Drivers			
3COM 3C905C Drivers for Microsoft Windows XP	-	-	5.40 A
Agere Systems PCI Soft Modem	2.1.37.8	-	-
Broadcomm Drivers for Windows XP and 2000	7.73	6.34 A	5.5.13
HP WLAN 802.11a-b-g PCI WL500 (post launch availability)	2.4.225	-	-
HP WLAN 802.11b WL220	-	1.1.5.0 A	-
Intel(R) PRO/1000 MT Drivers for Windows XP	6.4.16.1	6.4.16.1 A	6.4.16.1 A
Lucent 56K v.90 Win Modem Driver	-	8.22 E	8.28 F
O2 Micro Basic Smartcard Keyboard Drivers	-	1.3.5.3 D	-
PSeries Drivers for PCMCIA	-	5.07.04 A (CMT/SFF only)	-
Graphics Drivers			
Intel 845G ADD Driver	-	-	6.14.10.3732 A
Intel 845G Graphics Driver (both DVI support and SCSI issue addressed)	-	-	6.14.10.3732 A
Intel BDG 2K/XP GRPH DVR (no DVI support)	-	-	6.14.10.3732 A
Intel(R) 915G Express Chipset Family	6.14.10.3829	-	-
Intel 865 Graphics Driver	-	6.13.01.3485 A	-
nVidia Graphics Drivers	-	-	45.23 A
nVidia Graphics Drivers	-	43.03 B	-
Input Drivers			
Wireless Keyboard and Mouse Applet	-	1.14 B	-
Wireless Mouse (Only) Applet	-	1.09 B	-
Easy Access Keyboard support software	-	8.0.0.678C E	8.0.0.683
OS Support / Microsoft QFEs			
Microsoft DirectX 9.0b	1.00 A	1.00 A	-
Microsoft Explorer Hang during PnP fix - KB314405	1.00	-	-
Microsoft HTML Help Topics fix - Q811630	1.00	-	-
Microsoft IE6 SP1 November 03 Cumulative patch - Q824145	1.00	-	-
Microsoft Messenger Vulnerability fix - Q828035	1.00	-	-
Microsoft Windows DMA Downshift Fix	1.00	1.00 A	-
Microsoft Windows XP Service Pack 1 Hotfixes	1.00	-	-
Monitor INF and ICM Files	1.2	1.10 A	-
Multiple Fixes In RPC - Q824146	1.00	-	-
Chinese Quad Byte Support	2.00 A	2.00 A	1.00 A
Chinese Quad Byte Support	2.00 A	(integrated into SP1)	1.00 A
Dot Net for WinXP	1.1	1.00 A	-
Enable 48 Bit LBA QFE Q306583	(integrated into SP1)	(integrated into SP1)	1.00 A
Intel Chipset Support for Windows	6.00	5.00 A (Intel 865)	5.1.0.1008 A
Microsoft DirectX 9.0	1.00 A	1.00 A	-
NTFS Security Update	1.02	1.02	1.00 B

Windows XP Driver Comparison	dc7100	d530	D510
Name	Version	Version	Version
Q828028 Microsoft Vulnerability within ASN fix	1.00	-	-
Q828741_Cumulative Update_Vulnerability within RPC_DCOM fix	1.00	-	-
Security Update_Vulnerability within Microsoft Windows fix_Q835732	1.00	-	-
Set Video Refresh rate.	1.2.1.3	-	-
Sun Java	1.4.2_03	-	-
USB 2.0 for Windows XP	-	-	4.08 B
USB 2.0 Upgrade for Windows XP (Q810090)	-	1.00 A	-
USB 2.0 Upgrades for Windows XP	1.00	-	-
Windows XP MUI Pack - BULGARIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - CROATIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - ESTONIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - LATVIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - LITHUANIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - ROMANIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - SLOVAKIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - SLOVENIAN	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP MUI Pack - THAI	1.00 A (XP Pro only)	1.00 A (XP Pro only)	1.00 A (XP Pro only)
Windows XP SATA Fix Q812415	1.00	1.00 A	-
Windows XP Unchecked Buffer in Windows Shell Fix Q329390	1.00	1.00 A	-
Windows XP1 for Application Installer	(integrated into image)	(integrated into image)	1.00 A (Preloaded)
WinXP Hibernation Fix (q312372)	(integrated into SP1)	(integrated into SP1)	1.00 A
WinXP Home and Pro ICH4IDE Fix	-	-	1.00 A
WinXP Home User Account QFE Q314412	(integrated into SP1)	(integrated into SP1)	1.00 B (XP Home only)
WinXP ICH5 Intelide.sys Fix	-	1.00 A	-
WinXP OOBE DLL Fix Q308678	(integrated into SP1)	(integrated into SP1)	1.00 D
WinXP Recovery Console Fix	(integrated into SP1)	(integrated into SP1)	1.00 A
WinXP Remote Assistance SLP Fix Q311889	(integrated into SP1)	(integrated into SP1)	1.00 E
WinXP Unmountable Boot Volume Q315403	(integrated into SP1)	(integrated into SP1)	1.00 B
WinXP UPNP Buffer Update Q315000	(integrated into SP1)	(integrated into SP1)	1.00 C
Preinstalled Applications			
Adobe Acrobat Reader	6.00	Preload for this product line.	-
Application Installer	2.00	2.00 B	2.00 A
Compaq branded Help and Support Center	-	-	2.21 E
HP branded Help Support Center	3.100.6.1	2.0.9.3 C	-
HP ProtectTools Embedded Security	3.00 (XP Pro Only) *	1.50.61.3 A (XP Pro Only)	-
HP ProtectTools Security Manager	1.00	-	-
Intervideo WinDVD Software	5.0.11.285	4.0.11.268 K	4.0.11.300 A
PDF Complete	2.5.15	-	-
Safety and Comfort Guide - Desktop	3.00.3.2	1.00 B	-
ZIM SMS Mail	1.00	-	-
Preloaded Applications			
Adobe Acrobat Reader	Preinstall for this product	Preload for this product	-
Altiris Deployment Agent for Windows- Preload	5.5	5.50 A4	5.50 A2
Altiris Local Recovery	6.00.381	-	-
Diagnostics for Windows - Commercial	Available on HP.com	4.06 A	4.12
Insight Management Agent for Clients	-	5.01 B	5.01 B
Norton AntiVirus 2002	-	-	2002 E
Norton AntiVirus 2003	-	2003 A	-
Norton AntiVirus 2004	2004 A	-	-

Windows XP Driver Comparison	dc7100	d530	D510
Name	Version	Version	Version
Remote Diags Enabling Agent	-	3.02 N	2.14 H
CD Delivered Applications			
Roxio Easy CD Creator	6.1.1.48	5.3.4.21 SP19a B2F	5.3.4.21 SP19A A
Web Delivered Applications			
HP Client Manager Software	hp.com/go/easy deploy	hp.com/go/easy deploy	hp.com/go/easy deploy
System Software Manager (SSM)	hp.com/go/ssm	hp.com/go/ssm	hp.com/go/ssm

Table 3 Windows XP Software Drivers available for dc7100

Windows XP dc7100 Softpaqs	dc7100
Name	Version
ROM BIOS	
ROM Firmware for dc71000 (786C1)	In development
Audio Drivers	
ADI AC97 Integrated Digital Audio	5.12.1.4070
ATI Radeon Graphics Driver PCI Express (post launch availability)	8.01
Communications Drivers	
Agere Systems PCI Soft Modem	2.1.37.8
Broadcom Drivers for Windows XP and 2000	7.73
HP WLAN 802.11a-b-g PCI WL500 (post launch availability)	2.4.225
Intel(R) PRO/1000 MT Drivers for Windows XP	6.4.16.1
Graphics Drivers	
Intel(R) 82915G Express Chipset Family	6.14.10.3829
OS Support / Microsoft QFEs	
Microsoft Explorer Hang during PnP fix - KB314405	1
Microsoft HTML Help Topics fix - Q811630	1
Microsoft IE6 SP1 November 03 Cumulative patch - Q824145	1
Microsoft Messenger Vulnerability fix - Q828035	1
Microsoft Windows DMA Downshift Fix	1
Monitor INF and ICM Files	1.2
Multiple Fixes In RPC - Q824146	1
Intel Chipset Support for Windows	6.00
NTFS Security Update	1.02
Q828028 Microsoft Vulnerability within ASN fix	1.00
Q828741_Cumulative Update_Vulnerability within RPC_DCOM fix	1.00
Security Update_Vulnerability within Microsoft Windows fix_Q835732	1.00
Set Video Refresh rate.	1.2.1.3
Sun Java	1.4.2_03
USB 2.0 Upgrades for Windows XP	1.00
Windows XP SATA Fix Q812415	1
Windows XP Unchecked Buffer in Windows Shell Fix Q329390	1
Preinstalled Applications	
HP branded Help Support Center	3.100.6.1
HP ProtectTools Embedded Security	3.00 (XP Pro Only) *
HP ProtectTools Security Manager	1.00
Intervideo WinDVD Software	5.0.11.285

Windows XP dc7100 Softpaqs	dc7100
Name	Version
PDF Complete	2.5.15
Safety and Comfort Guide - Desktop	3.00.3.2
ZIM SMS Mail	1.00
Preloaded Applications	
Altiris Deployment Agent for Windows (A Client) - Preload	5.5
Altiris Local Recovery	6.00.381
Diagnostics for Windows - Commercial	Available at HP.com
Norton AntiVirus 2004	2004 A

Microsoft Windows 2000

PC OEMs are no longer allowed to ship personal computers with Windows 2000 licenses, thus HP will not be providing this operating system preinstalled on the dc7100 series. HP will continue to provide software support for Windows 2000 Professional with Service Pack 3 and Service Pack 4. Software drivers to support the dc7100 series for Windows 2000 are available for download from www.hp.com usually within 30 days of product launch. As a service, HP can install Windows 2000 on new PCs using customer provided Windows 2000 image via the HP PC Customization Services (PCCS) process. Interested customers should contact their HP account manger. Below is a list of Windows 2000 compatible drivers available usually within 30 days of the launch of the dc7100 product line:

Table 4 Windows 2000 Software Drivers available for dc7100

Windows 2000 dc7100 Softpaqs	dc7100
Name	Version
ROM BIOS	
ROM Firmware for dc71000 (786C1)	In development – Release TBD
Audio Drivers	
ADI AC97 Integrated Digital Audio	5.12.1.4070
Communications Drivers	
Agere Systems PCI Soft Modem	2.1.37.8
ATI Radeon Graphics Driver PCI Express	8.01
Broadcom Drivers for Windows XP and 2000	7.73
HP WLAN 802.11a-b-g PCI WL500	2.4.225
Intel(R) PRO/1000 MT Drivers for Windows 2000	6.4.16.1
Graphics Drivers	
Intel(R) 82915G Express Chipset Family	6.14.10.3829
OS Support / Microsoft QFEs	
Monitor INF and ICM Files	1.2
Intel Chipset Support for Windows	6.00
Set Video Refresh rate.	1.2.1.3
Sun Java	1.4.2_03
Preinstalled Applications	
HP ProtectTools Embedded Security	3.00 (XP Pro Only) *
HP ProtectTools Security Manager	1.00
Preloaded Applications	
Altiris Deployment Agent for Windows (A Client)	5.5

Microsoft Windows NT

Microsoft NT is not supported for the dc7100 series. Customers may experience some success with running Windows NT on the dc7100 but there will be limitations. Windows NT was retired by Microsoft from the PC OEM channel on 30 June 2002 with all maintenance support dropped on 30 June 2003. Most hardware technology introduced after 30 June 2003 is not supported by Microsoft or Intel. They will no longer provide the required

software updates to make this operating system function. Please refer to the HP white paper *Operating System and Device Driver Support for HP Business Desktop Computers*, part number 372899-001.

ROM BIOS Information

Key features of the dc7100 BIOS include:

Deployment and manageability - HP BIOS provides several technologies that help integrate the HP Business desktop computer into the enterprise such as PXE, remote configuration, remote control, and F10 Setup support for 12 languages.

Stability - HP BIOS supports the HP stable product roadmap by releasing only critical BIOS changes to the factory and advanced change notification.

Security - HP BIOS offers a robust and flexible set of security features to help the system administrator secure their systems from removal of sensitive data, and help prevent access by unauthorized users, subversion of OS security policies, removal of hardware, flash of rogue BIOS images, master boot record viruses, and attacks on BIOS settings.

Thermal and power management - The HP BIOS provides and enables thermal and power management technologies to assist in operating the HP Business Desktop computer in any enterprise environment.

Serviceability - HP BIOS provides diagnostic and detailed service information.

Upgrades and recovery - HP BIOS provides numerous ways to upgrade HP Business Desktop computers including BIOS updates from within DOS (ROMPAQ, Flashlite), BIOS updates from within Windows (CPQFlash, SSM), and fail-safe recovery.

Additional BIOS Highlighted Features

Power-On password - The power-on password helps prevent an unauthorized user from powering on the system. After a power-on password is established, the user is required to type the password during the power-on process.

Administrator password - The administrator password, also known as the setup password, helps prevent unauthorized changes to the system configuration. If the administrator password is not known, the BIOS version cannot be changed and changes cannot be made to BIOS settings using F10 setup or under the OS.

Advanced Configuration and Power Interface (ACPI) - Advanced Configuration and Power Interface (ACPI) represents a significant innovation in power and configuration management, allowing operating systems and applications to manage power based on activity and usage. HP Compaq dc7100 models use ACPI to provide power conservation features under Windows XP and Windows 2000.

The ROM BIOS version that will initially ship on the dc7100 is version 1.xx. For more information related to the dc7100 BIOS please refer to the white paper *HP Desktop BIOS*, part number 371246-001.

Common Image Considerations

One of the design benefits of the dc7100 product family is that HP carefully engineers the software image to be compatible across the various hardware form factors within the family. An important ingredient is delivering

common hardware architecture as this reduces image compatibility issues. HP realizes that its customers create their own OS images to incorporate applications and standards for their business.

For customers who create their own images it is recommended by HP to begin with the factory preinstalled image as a "base" for the common image. If the file system type or the partition structure is not desirable, HP recommends that you still use the factory preinstalled image to build the common image. File system and partitioning can be customized during the image load phase of the deployment process.

If the factory preinstalled image has already been removed from the hard drive, you may restore that image using the *Restore Plus!* CD and the *Restore Plus!* documentation included with the computer. For more information on building a common image please refer to HP document, *Building a Common Image, Developing a Common Image across HP Desktops,* part number 339083-002.

Software Image Development on dc7100 Stable Products

At the product launch of the dc7100 product family, the dc7100 small form factor (SFF) and convertible mini-tower (CMT) designs will utilize the Intel 915G chipset. In September 2004 timeframe, HP will introduce the dc7100 ultra-slim desktop (USDT) based on an upcoming Intel chipset. It is important to point out that HP will deliver a common software OS image that is fully compatible between the dc7100 CMT/SFF and USDT architectures.

- To prevent visible hardware re-enumeration between the SFF/CMT and USDT systems, HP recommends that customers follow recommended procedures to prepare their system image using Microsoft's Sysprep tool. For guidelines on how to develop a sysprep image refer to HP whitepaper, "Building a Common Image" part number 339083-002.
- If the software image is captured without first using Sysprep but instead copied to new systems using a disk duplication tool, the operating system will require discovery of new hardware causing visible re-enumeration, even on identical chipset hardware.

Visible re-enumeration is common function of the operating system (to enable hardware support) and should not be a cause for concern as long as the appropriate drivers are available for the operation system to locate and install. If during re-enumeration a software driver is not found during the discovery process the affected hardware will not be properly installed and the hardware device will be unavailable to the user. The hardware devices can be viewed using Windows Device Manager and each unavailable hardware device will display a yellow exclamation mark "!" commonly referred to as bang. At this point, proper loading of the appropriate software driver for the hardware device will enable the unsupported device to function.

Important Note: When creating a master image it is very important to keep the hardware device drivers in their original directory locations. Moving them can cause Windows to not properly locate the software drivers for installation during the hardware discovery process and fail. If it is deemed necessary to move drivers to another location within the image, it is important to update the path directory requirement for the Sysprep process. For more about driver directory path structures see "Pooling Drivers on the Reference Machine" in the HP whitepaper, "Building a Common Image" part number 339083-002.

Software delivery

Delivery methods for software updates available for HP commercial computers include:

- HP Worldwide Web site and Download Facility (http://www.hp.com)
- HP Support Software CD
- HP Restore Plus! CD

HP Worldwide Web site and download facility

Individual drivers and utilities can be downloaded, in the form of SoftPaqs, from the HP Download Facility or from the Web site at http://h18000.www1.hp.com/support/files/ or ftp://ftp.compaq.com/pub/softpaq/. SoftPaqs provide a distribution method for driver and ROM updates and product software enhancements.

HP Support Software CD

The Support Software CD (SSCD) includes updated drivers and utilities for HP commercial notebook, desktop, and workstation computers. Key drivers and utilities for HP computers are included on the SSCD. The user interface is in English, French, Italian, German, Spanish, and Japanese. The SSCD is updated regularly and is available either through an annual subscription or as a one-time purchase. Subscriptions can be purchased through customer support or from an authorized dealer.

HP Restore Plus! CD

HP *Restore Plus!* CDs are shipped with each HP Compaq desktop system. The CDs provide an easy-to-use complete restore solution for preinstalled operating systems. This restore solution allows users to return the operating system to near factory state. Please refer to the *Restore Plus!* installation manual for instructions on restore options.

Software enhancements

This section discusses the following software enhancements:

- HP Client Manager Software
- Video
- Audio
- Quick Launch Button Software
- User Manuals

HP Client Manager Software

HP Client Management Solutions, part of the HP Adaptive Management initiative, respond to customer needs for easy-to-manage computers in stand-alone and networked environments. HP, in partnership with Altiris, a recognized leader in delivering cost-reducing lifecycle management technologies, offers a cohesive set of solutions that span the entire IT lifecycle. The combination of HP Client Manager Software and Altiris solutions helps enables customers to lower total ownership costs on HP systems. HP and Altiris solutions focus on business needs in the following critical lifecycle areas:

- HP platform management – Proactively respond to hardware changes, alerts, and manage mass updates to system software.
- Deployment & Migration – Manage the end-to-end software deployment and migration process.
- Inventory & Asset management – Keep track of hardware and software within the business environment.
- Help desk & problem resolution – Help resolve customer issues and streamline the help desk.
- Connectors – Integrate with enterprise technology and systems management solutions.

- With both stand-alone solutions and integrated suites, customers can manage hardware and software from a single Web-based console to address the complete IT lifecycle. For more information, see the brochure, *HP and Altiris Client Management Solutions* (5981-4665EN), or visit the HP Web site at www.hp.com/go/easydeploy.

Video

HP dc7100 PCs feature the Integrated Intel Graphics Media Accelerator 900. Intel software drivers enable all functionality of the video hardware. Driver support is complemented by a display utility that provides easy access to video settings through the Windows Control Panel.

Audio

AC97 Audio drivers from Analog Devices are included on the dc7100 enable the sound subsystem to run multimedia applications using Microsoft DirectSound audio capability.

Modular Keyboard Quick Launch button support

HP includes a software based programmable keyboard utility that is provided with the new HP Modular Keyboard option kit. All keys are reprogrammable under Windows XP through the Modular Access keyboard software applet supplied on the IO and Security CD within the kit. This software is a simpler version of the previous Easy Access Keyboard software and is supported in 6 major languages (English, French, Italian, German, Spanish, and Japanese) when available.

DMI Transition

The Desktop Management Task Force (DMTF) introduced the DMI standard almost ten years ago. Due to new standards adoption such as the Common Information Model (CIM), the DMTF has initiated end-of-life for DMI. Given other advancements in HP Client Management Solutions, HP Systems Insight Manager, and Microsoft's implementation of CIM, known as Windows Management Instrumentation (WMI), the HP Insight Management Agent is no longer being provided on new HP commercial desktop, workstation, and notebook models introduced after January 1, 2004.

Microsoft Windows Management Instrumentation (WMI) is standard with Windows 2000 and Windows XP. WMI provides hardware inventory and alert information directly through the Windows OS to a system management application.

HP Client Manager Software (HP CMS) developed with Altiris, is a free hardware management solution for HP commercial desktop, notebook and workstation models. It tracks detailed inventory information, monitors hardware faults, and can update drivers and BIOS on client PCs. HP CMS can also integrate with HP Systems Insight Manager to provide consolidated deployment and management of HP clients and servers from a single HP Systems Insight Manager console.

User manuals

Numerous manuals are available on the *Documentation* CD included with the dc7100 desktop:

- **Quick Setup** - Provides information needed to connect your computer and peripheral devices.
- **Getting Started** - Provides information needed to set up factory-provided software. Basic troubleshooting is also provided should you have problems during initial startup.
- **Hardware Reference** - Provides basic information for upgrading this series of computers.
- **Computer Setup (F10) Utility** - Provides instructions on how to use Computer Setup. This tool is used to reconfigure and modify computer default settings when new hardware is installed and for maintenance purposes.
- **Desktop Management Guide** - Provides definitions and instructions for using security and manageability features that are preinstalled on select models.
- **HP ProtectTools Embedded Security** - Provides instructions for using the software that allows you to configure settings for the HP ProtectTools Embedded Security chip.

- Network and Internet Connections - Provides definitions and instructions for using network interface controller (NIC) features that are preinstalled on select desktop models.

- Troubleshooting - Provides helpful hints and solutions for troubleshooting this series of computers as well as scenarios for possible hardware and software problems.

- Safety and Regulatory Information - Provides safety and regulatory information that is compliant with U.S., Canadian, and International regulations.

- Warranty* - Provides the warranty terms and conditions, warranty period, and types of warranty service available for the product

- * This document is provided in print and on the Web only, and is not included on the Documentation CD.

General Software Image Contents

HP Compaq Business Desktops come standard with a factory-installed software image. The image consists of a number of separate software components including the operating system (such as Microsoft Windows XP Professional Edition), drivers for the specific hardware devices included with your system (such as graphics, network interface cards, modems, etc.) and a small number of additional applications. See the *Additional Software* section for possible list of applications.

Quick fixes (QFEs) are also included with the image for any Microsoft operating system issues that HP identified as problems that might affect its customers. These QFEs will show up under the Add/Remove Programs applet in the Control Panel. Since most of these fixes are critical in nature, they will appear grayed out by design so they cannot be removed.

Standalone service packs may also be preloaded on some systems depending on the version of the integrated operating system and the timing and nature of the HP Compaq Business Desktop product introduction. Other software applications that are preloaded include optional business software. Examples of these types of applications include Norton Anti-Virus, and Altiris Deployment Agent for Windows (A Client). An HP developed application called Software Setup provides a user interface to allow installation of these optional preloaded programs.

Following is a more detailed list of general software that may comprise the factory image:

Microsoft Windows Operating System Software:

- Windows XP Professional or Windows XP Home Edition
- Step By Step Interactive for Windows XP Home and Pro (For locales supported by Microsoft)
- Microsoft Direct X
- .Net (pronounced dot net) Framework for Windows XP
- Microsoft-provided QFE's
- Quad Byte Supplement (for Simplified Chinese language only)
- Windows XP Professional Multilingual User Interface (MUI) Pack (for Eastern European and Thai regions)
- Standalone Service Packs

Hardware/OEM specific drivers and files:

- Graphics
- Network Interface Card

- Audio
- Modem
- Wireless LAN
- HP Monitor INF
- Chipset INF
- HP SLP Driver files for Windows XP – Allows a user to immediately use Windows XP without having to activate the operating system with Microsoft
- HP Online Crash Analysis File
- HP Security Guest account fix

HP Specific Applications

- HP Help and Support Center for Windows XP
- HP Application Installer (for preloaded components)
- HP Online EULA for Windows XP
- HP Safety and Comfort Guide
- HP Technical Support Phonebook

Other typically preinstalled applications

- Altiris Deployment Agent for Windows – A Client (preloaded)
- Adobe Acrobat Reader (preinstalled)
- Microsoft Word (optional)
- Microsoft Works (optional)
- Microsoft Office XP (optional)
- Norton Anti Virus (optional)

In addition to the above list, some HP specific tools will temporarily reside on the hard drive during factory installation. These are later deleted from the drive but will show up if you examine the hard drive contents using one of the methods in the next section of this document. Some examples of these tools are:

- HP File Based installer
- HP FBI Toolbox
- HP Marketing Tweak Scripts
- HP Marketing Tweak Bitmaps & URLs
- Multiple OS Processing Module
- WinPE with Network Support
- Device Checking Utility
- Windows XP Unbundle Processing Tweaks
- Windows XP 2000 OS Tweaks
- CDC Flag Check Utility
- Extend MSC
- SDV ghost load high flag
- System corruption checker

- Set Video Refresh rate
- Preinstall Image tag
- Run CDC flag for USB devices
- Enable MSI extended debug
- Power management settings
- CVA Reader
- INFO.BOM Generator
- Online Crash Analysis Utility

Examining the Image Contents

Begin with the preinstalled image as a base for determining what is installed. If the preinstalled image has already been removed from the hard drive, you may restore using the *Restore Plus!* CD.

This white paper describes three methods of examining the factory-preinstalled image:

Examining the INFO.BOM file (OS-independent)

The preinstalled image on an HP Compaq Business Desktop contains a file called INFO.BOM located in the c:\system.sav folder on the hard drive. This is a plain text file that contains a list of preinstalled software. The following shows a sample INFO.BOM file:

```
-----------------------------------------------------------------------------

ID#, P/N, PrismRev, Description, Version, Revision, Pass

-----------------------------------------------------------------------------

(01) 000000-00A, 100, POGEN PLACEHOLDER
(02) 218154-B2R, 100, MARKETING TWEAK SCRIPTS, VER 1.00, REV C, PASS 9
(03) 218155-B2T, 101, MARKETING BITMAPS AND URLS, VER 1.10, REV G, PASS 2
(04) 226623-B2H, 100, APPLICATION INSTALLER, VER 2.00, REV H, PASS 1
(05) 257956-B2C, 101, WINDOWS XP SLP FILES, VER 2.00, REV A, PASS 2
(06) 267992-B2D, 100, SYSTEM CORRUPTION CHECKER, VER 1.00, REV D, PASS 1
(07) 274432-B2H, 100, SET VIDEO REFRESH RATE., VER 1.2.1.3, REV H, PASS 1
(08) 284840-B2B, 100, BRAND.INI - COM DESK SRP, VER 1.00, REV B, PASS 1
(09) 291529-B2D, 100, TECH SUPPORT PHONEBOOK, VER 1.00, REV A, PASS 8
(10) 303647-B2C, 100, POWER MANAGEMENT SETTINGS, VER 1.00, REV A, PASS 4
(11) 303730-B2D, 100, MONITOR INF AND ICM FILES, VER 1.20, REV D, PASS 1
(12) 305407-B2A, 106, WINDOWS XP SP1 PRO AND HOME OS TWEAKS, VER 2.00, REV A, PASS 6
(13) 305408-B2B, 102, WINDOWS XP SP1 PRO AND HOME UNBUNDLE PROCESS TWEAKS, VER 3.00, REV A, PASS 2
(14) 306153-B2C, 100, ONLINE CRASH ANALYSIS FILE, VER 4.2, REV C, PASS 1
(15) 307374-B2B, 100, EXTEND NTFS MSC, VER 1.00, REV A, PASS 5
(16) 316762-B21, 100, ASSEMBLY
     (16.01) 306733-B2A, 100, SDV GHOST LOAD HIGH FLAG, VER 1.00, REV A, PASS 1
     (16.02) 322276-B2A, 100
(17) 316856-B2E, 107, ADI AC97 INTEGRATED DIGITAL AUDIO, VER 5.12.1.4070, REV E, PASS 9
     * VEN_8086&DEV_266E&SUBSYS_3005103C, VEN_8086&DEV_266E&SUBSYS_3006103C, VEN_8086&DEV_266E&SUBSYS_3007103C
(18) 318044-B2E, 101, ADOBE ACROBAT READER, VER 6.00, REV E, PASS 2
(19) 323301-B2B, 100, HYPERTHREADING DEFAULTS, VER 1.00, REV A, PASS 3
(20) 323740-B2D, 106, HP PROTECTTOOLS EMBEDDED SECURITY, VER 3.00, REV D, PASS 7
     * ACPI\IFX0101
(21) 325642-B2E, 100, NTFS SECURITY UPDATE, VER E, REV 1.02, PASS 1
(22) 325643-B2B, 101, ALTIRIS EXPRESS AGENT - PRELOAD, VER 5.50, REV B, PASS 2
(23) 325740-B2A, 100, WINDOWS XP UNCHECKED BUFFER IN WINDOWS SHELL FIX Q329390, VER 1.00, REV A, PASS 1
(24) 325755-B2A, 102, MICROSOFT DIRECTX 9.0, VER 1.00, REV A, PASS 4
(25) 325939-B2B, 100, IT DEPT INFO README FILE, VER 1.00, REV B, PASS 1
(26) 326094-B2A, 100, PREINSTALL IMAGE TAG, VER 1.00, REV A, PASS 1
(27) 330899-B2A, 102, DRIVER REPAIR TEXT ADD ON, VER 1.00, REV A, PASS 3
(28) 333095-B2A, 100, INSTALL SHIELD FIX, VER 1, REV A, PASS 1
(29) 335591-B2B, 100, WINDOWS XP SATA FIX Q812415, VER 1.00, REV B, PASS 1
(30) 336614-B2D, 100, USB 2.0 UPGRADES FOR WINDOWS XP, VER 1.00, REV D, PASS 1
(31) 339254-B2A, 101, MICROSOFT WINDOWS DMA DOWNSHIFT FIX, VER 1.00, REV A, PASS 2
(32) 342538-B2A, 100, DOT NET 1.1 FOR WINXP INSTALL SCRIPT, VER 1.10, REV A, PASS 1
(33) 343140-B2E, 100, SUN JAVA, VER 1.4.2_03, REV E, PASS 1
(34) 347963-B2B, 100, MULTIPLE FIXES IN RPC - Q824146, VER 1.00, REV B, PASS 2
(35) 347966-B2A, 100, MICROSOFT DIRECTX 9.0B, VER 1.00, REV A, PASS 2
(36) 348293-B2A, 100, MICROSOFT EXPLORER HANG DURING PNP FIX - KB314405, VER 1.00, REV A, PASS 1
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(37) 352304-B2A, 100, MICROSOFT HTML HELP TOPICS FIX - Q811630, VER 1.00, REV A, PASS 1
(38) 352601-006, 100, ASSEMBLY
     (38.01) 303650-00E, 100, COMMERCIAL EULA, VER 1.00, REV A, PASS 6
     (38.02) 307970-00B, 100, WINXP PROFESSIONAL SP1 SBSI, VER 2.00, REV A, PASS 1
     (38.03) 317498-00B, 100, DOT NET FOR WINXP, VER 1.10, REV A, PASS 1
     (38.04) 340314-00A, 101, WINDOWS XP PROFESSIONAL SP1A INTEGRATED I386, VER 1.00, REV A, PASS 2
     (38.05) 340322-00A, 102, WINDOWS XP SP1A PROFESSIONAL OS IMAGE APIC, VER 1.00, REV A, PASS 2
(39) 355084-B2A, 100, MICROSOFT MESSENGER VULNERABILITY FIX - Q828035, VER 1.00, REV A, PASS 1
(40) 356854-B2A, 100, MICROSOFT IE6 SP1 NOVEMBER 03 CUMULATIVE PATCH - Q824145, VER 1.00, REV A, PASS 1
(41) 357826-B2A, 101, WINDOWS XP SBSI GLOBAL INSTALL SCRIPT, VER 1.00, REV A, PASS 2
(42) 359229-B21, 109, ASSEMBLY
     (42.01) 153574-B2K, 100, FBI INSTALLATION TOOL BOX, VER 2.50, REV C, PASS 4
     (42.02) 228570-B2W, 101, MULTIPLE OS PROCESSING MODULE, VER 1.40, REV A, PASS 5
       * USR_FACTORY
     (42.03) 279843-B2D, 100, DMI UIA TOOL, VER 1.00, REV D, PASS 1
     (42.04) 288252-B2C, 107, WINPE WITH NETWORK SUPPORT, VER 1.00, REV C, PASS 6
     (42.05) 291900-B2F, 100, DEVICE CHECKING UTIL 32-BIT, VER 1.00, REV F, PASS 1
     (42.06) 300593-B2B, 100, INFO.BOM GENERATOR, VER 1.00, REV B, PASS 1
     (42.07) 325670-B2C, 101, HP FILE BASED INSTALLER, VER 1.60, REV E, PASS 4
     (42.08) 333746-B2C, 100, CDC FLAG CHECK UTILITY, VER 1.05, REV C, PASS 1
     (42.09) 346573-B2E, 102, DEVICE CHECKING UTIL 32-BIT CONFIG, VER 2.00, REV E, PASS 3
     (42.10) 367180-B2A, 100, CHECK FOR CERTAIN FILES, VER 1.00, REV A, PASS 1
(43) 359674-B2A, 108, HP PROTECTTOOLS SECURITY MANAGER, VER 1.0, REV A, PASS 9
(44) 359678-B2A, 107, BROADCOM DRIVERS FOR WINDOWS XP AND 2000, VER 7.73.0.0, REV A, PASS 9
     * VEN_14E4&DEV_1676, VEN_14E4&DEV_1677, VEN_14E4&DEV_1696, VEN_14E4&DEV_16A6, VEN_14E4&DEV_1653, VEN_14E4&DEV_166E
(45) 360182-B2B, 101, MICROSOFT WINDOWS XP SERVICE PACK 1 HOTFIXES, VER 1.00, REV B, PASS 2
(46) 360426-B2A, 114, INTEL GRANTSDALE GRAPHICS DRIVER, VER 6.14.10.3829, REV A, PASS 14
     * VEN_8086&DEV_2582, VEN_8086&DEV_2782
(47) 360458-B2B, 100, PROTECT YOUR PC OOBE SCREEN, VER 1.00, REV A, PASS 2
(48) 361874-B2A, 102, INTEL CHIPSET SUPPORT FOR WINDOWS XP (ICH6), VER 6.00, REV A, PASS 3
     * VEN_8086&DEV_2580, VEN_8086&DEV_2581, VEN_8086&DEV_2584, VEN_8086&DEV_2585, VEN_8086&DEV_2640,
VEN_8086&DEV_2641, VEN_8086&DEV_2642, VEN_8086&DEV_266A, VEN_8086&DEV_244E, VEN_8086&DEV_2448, VEN_8086&DEV_2660,
VEN_8086&DEV_2662, VEN_8086&DEV_2664, VEN_8086&DEV_2666, VEN_8086&DEV_2651, VEN_8086&DEV_2652, VEN_8086&DEV_266F,
VEN_8086&DEV_2658, VEN_8086&DEV_2659, VEN_8086&DEV_265A, VEN_8086&DEV_265B, VEN_8086&DEV_265C
(49) 364887-B2B, 100, Q828028 MICROSOFT VULNERABILITY WITHIN ASN FIX, VER 1, REV B, PASS 1
(50) 370917-B2A, 101, SECURITY UPDATE_VULNERABILITY WITHIN MICROSOFT WINDOWS FIX_Q835732, VER 1.00, REV A, PASS 2
(51) 370918-B2A, 100, Q828741_CUMULATIVE UPDATE_VULNERABILITY WITHIN RPC_DCOM FIX, VER 1, REV A, PASS 1
```

The previous list includes the HP software part number, database revision, name of the software, version, revision, pass, and a list of hardware Plug-and-Play ID's that are supported (if applicable). You can use Notepad or any other application that displays text files to examine the contents of this file.

HP Branded XP Help and Support Module

The HP dc7100 series desktop ships with an HP modified Windows XP Help and Support module. This module includes many new customer support enhancement as well as a revised new look.

Feature Overview

- **My HP Computer**: Access general information about your HP PC in addition to installed hardware and software.

- **Display of Product name and Serial number**: Easy identification of product model and serial number. Information extracted from the system BIOS.

- **HP Product Information**: Web link to model specific product information (Internet connection required).

- **HP Software and Drivers Downloads**: Web link to model specific software and driver downloads (Internet connection required).

- **HP Support Tools**: Web link to HP Instant Support chat service (Internet connection required).

- **Contact HP for Support**: Access to HP Customer Support phone numbers and Web link to HP Instant Support chat service (Internet connection required for HP Instant Support chat service).
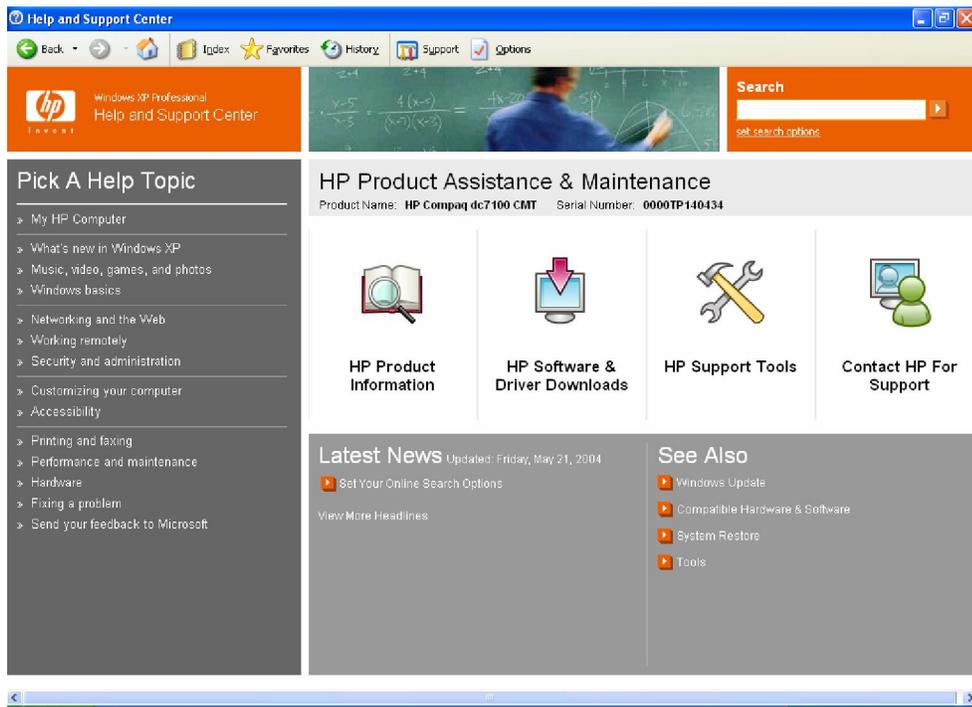
Figure 1 - Windows XP Help and Support – HP Version

Preloaded Components

Some software may be preloaded (versus preinstalled). To view a list of preloaded components, you can run HP Software Setup. To run Software Setup, click **Start** > **All Programs** > **Software Setup**. A welcome screen will be displayed followed by a list of preloaded components. From Software Setup, you can select the programs you want to install. The Software Setup application will launch the setup program for any of the components selected.
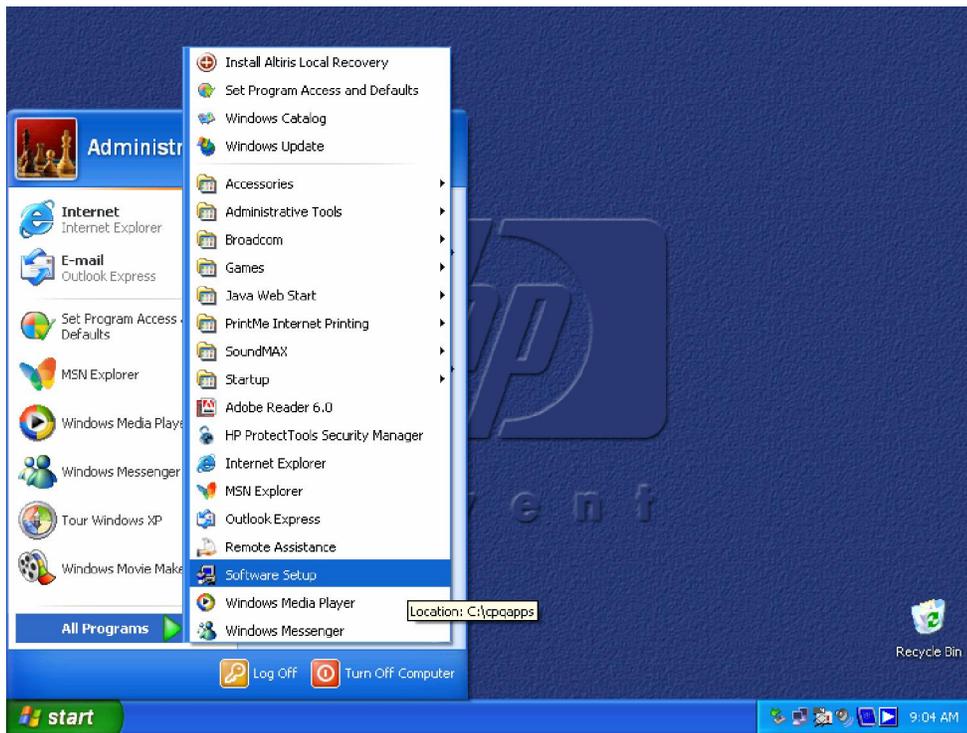
Figure 2 - Access to HP Software Setup
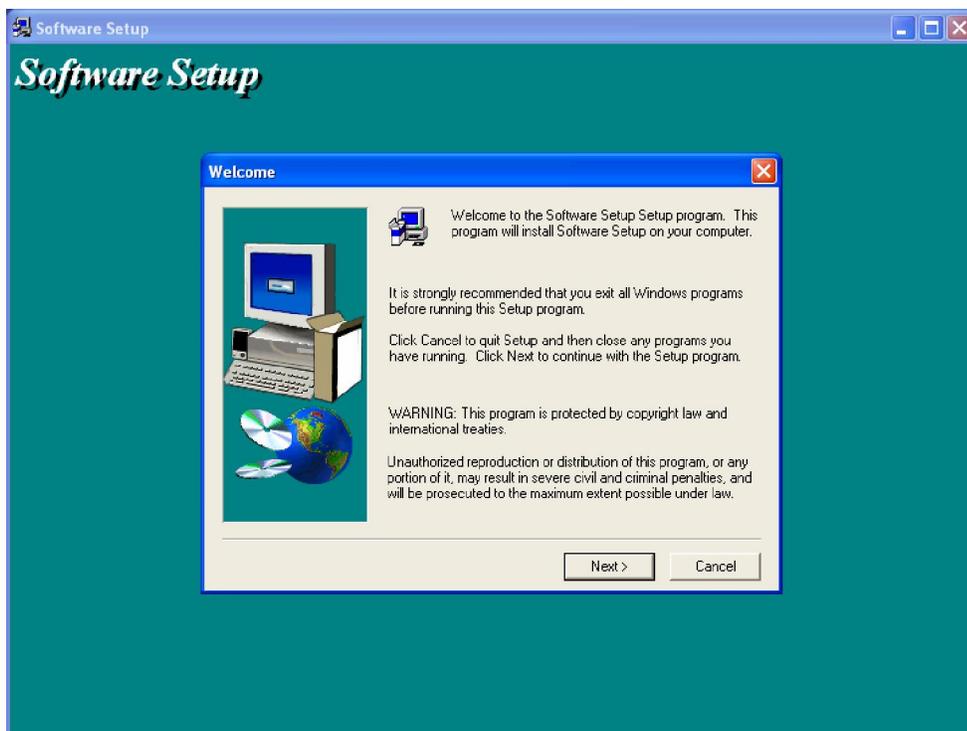
Figure 3 – HP Software Setup Welcome Screen
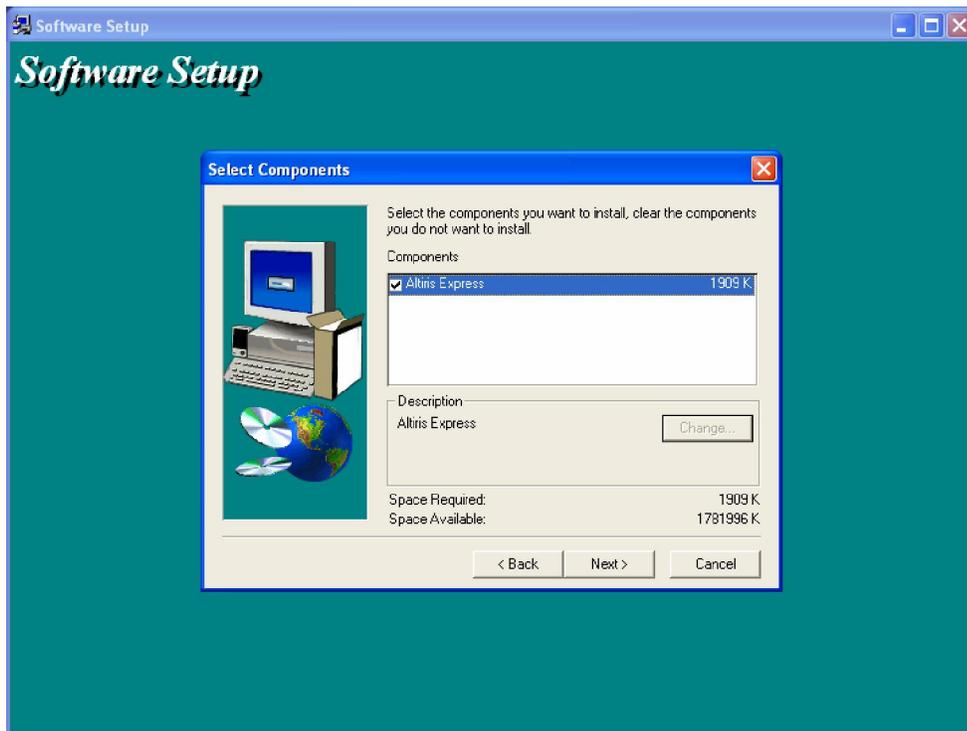
Figure 4 – HP Software Setup Screen

Additional Software

HP provides additional software on its PCs which can vary depending on the hardware configuration ordered. The additional software may be pre-loaded, preinstalled or provided on CD with the PC when shipped. Below is a list of additional software that may have shipped on your dc7100 system:

- Adobe Acrobat Reader – Adobe® Reader® 6.0 is an application that lets you view and print Adobe Portable Document Format (PDF) files on a variety of hardware and operating system platforms (ships preinstalled).

- Altris Local Recovery – With Local Recovery, file restoration is just a mouse click or keystroke away. To recover a deleted file, simply drag and drop using Windows Explorer. For a full system restoration, press the F11 key when the computer is booting and then select Full Restore from the menu (ships preloaded).

- Dantz Retrospect Express Backup for Windows – Retrospect Express Backup takes the drudgery out of backing up while providing a safe environment for important files. Instead of manually dragging files from a hard drive to storage media, Retrospect Express provides intelligent personal backup based on a user-defined schedule. Retrospect is simple to set up and run—the EasyScript setup wizard creates a complete backup strategy and begins your first backup in only minutes (ships on CD with HP CDRW, Combo CDRW/DVD and DVD+RW drives).

- HP ProtectTools – HP ProtectTools Embedded Security Solution Software is a comprehensive set of tools that enables use of the HP ProtectTools Embedded Security Chip available on select desktop and notebook computers from HP. This solution provides a range of security features and application support including local file/folder encryption, protected digital certificate operations and support for the RSA SecurID software token authentication solution. Designed to the Trusted Computing Group (TCG) standard, HP ProtectTools Embedded Security is ready for future applications designed to use the TCG standard, as well

as those available today. HP ProtectTools Embedded Security is a hardware security chip, called the Trusted Platform Module (TPM) that integrates the core elements of trust into the subsystem (ships with the HP TPM).

HP ProtectTools Smart Card Security Manager helps prevent unauthorized users from accessing business or personal data on your notebook, with added Smart Card BIOS preboot capabilities advantage of industry standards like CAPI and PKCS#11

- **Intervideo WinDVD** - Get the most out of your DVDs with InterVideo WinDVD 3, a PC Magazine Editor's Choice Award winner. WinDVD combines the picture and sound features of a PC to bring your DVDs to life. Features include time stretching to let you watch movies faster with natural audio, thumbnail bookmarks to instantly find your favorite scenes, fully-adjustable zoom and pan, and more. With comprehensive audio support, including Dolby Digital decoding for 2 to 5.1 channels, S/PDIF digital outputs for home theater integration, WinDVD lets you enjoy an unmatched theater experience anytime, anywhere (ships on CD with HP DVD drives).

- **Roxio EZ CD Creator** - Burn and share anything on CD - music just the way you like it, your photos, your videos - even backup your critical data - faster and easier than ever. Roxio Easy CD Creator allows you to record from CDs, LPs, MP3s and more as well as create your own high quality music CDs. Make collections of your photos and create powerful slide shows and video presentations to share with family or for business. Keep your important data secure by storing it on CD. The sleek new interface makes simple work of the most creative task (ships on CD with HP CDRW, Combo CDRW/DVD and DVD+RW drives).

- **PDF Complete Special Edition**- Generate PDF files from any Windows application with the click of a button. The PDF format is a de-facto standard for the distribution of "read-only" company to company document interchange. Output created by PDF Complete SE are 100% compatible with Adobe Acrobat reader. After PDF Complete Special Edition has created 500 pages, it begins to place a small PDF Complete watermark on the each page. A user may remove this watermark and receive additional features and benefits by upgrading to other PDF Complete products. However, even if a user does not choose to upgrade, PDF Complete Special Edition will continue to produce high quality PDF documents (ships preinstalled).

- **Sonic DVD-It!** - DVDit! is a revolutionary new software application from Sonic Solutions, the leader in DVD publishing systems. Sonic DVDit! is designed to work in your multimedia desktop environment and is compatible with a broad selection of software and hardware components; DVDit! is the center of your DVD production universe! It enables video professionals, graphic artists, and video enthusiasts to create stunning interactive Video content on their PC and publish it on DVD (ships on CD with HP DVD+RW drives).

- **ZIM SMS Mail** - ZIM SMS Mail is a unique new two-way wireless e-mail extension tool from ZIM Technologies, designed to leverage the immense popularity of SMS (Short Message Service) text messaging and any POP 3 e-mail in order to keep your wireless customers connected to their e-mail while on the go. ZIM SMS Mail is the ideal tool linking the power of e-mail and SMS text messaging to keep your customers in the loop and productive when and where they need to be (ships preinstalled).

Thank you for your purchase of and interest in HP business PC products. HP hopes that this white paper was useful in helping you understand the contents of your factory installed Business PC software image.

Frequently asked questions

Q: How can DVD movies be viewed on Business Desktop dc7100 models?
A: Intervideo WinDVD is provided on CD with dc7100 family products equipped with DVD hardware. A software-based DVD decoder/player features an easy-to-use interface and allows customers to view DVD video releases. The DVD player is installed from the Setup Software shortcut off of the Windows Start Menu. This application is designed for use with Windows XP and Windows 2000.

Q: Is the dc7100 preinstall image also compatible with other dc7100 models?
A: Yes, the dc7100 preinstalled software image has been tested with the CMT, USDT and SFF form factors.

Q: How do I obtain updated software components?
A: The latest software updates are available from the HP Web site at http://www.hp.com. For customers without Web access, the HP Software Support CD Kit is available.

Q: Will the current image change significantly if new models are introduced?
A: Changes made to the preinstall images will be limited to critical fixes, modifications that support new hardware features, and Microsoft related security issues or enhancements that will significantly improve overall system performance. Customers concerned about image changes should sign up for the HP Product Change Notification (PCN) process. See next question.

Q: How will I know what has changed?
A: Updated HP desktop family software white papers describe updates or differences in software versions that are introduced with new products. HP Product Change Notification (PCN) is another method of communication to inform customers of changes to shipping models. For more information, go to http://www.hp.com/go/pcn.

Q: What is the difference between preloaded and preinstalled software?
A: Preinstalled software refers to drivers, hardware enabling utilities, and applications that are ready to use as soon as your system has completed setup after initial power-on (unbundling). Preloaded software refers to applications and utilities that provide additional features on applicable models, such as management, DVD playback or CD-RW burning and must be installed prior to use.

Q: Why is some software preloaded?
A: Select software is preloaded to provide flexibility for our customers. It's loaded onto the hard drive but in an uninstalled state.

Q: How do I install preloaded software?
A: HP has made installation of preloaded software easy by including an Software Setup application. Simply launch Setup Software by clicking Start > Programs > Software Setup, select the desired applications, and follow the easy-to-use menus.

For more information

- To learn more about preinstalled software with OS support, contact your local HP sales representative or visit our Web site at http://www.hp.com.

HP Compaq dc7100 Software Overview Whitepaper